

REMARKS

Responsive to the outstanding Office Action, applicant has carefully studied the Examiner's rejections and the comments relative thereto. Favorable reconsideration of the application is respectfully requested in light of the amendments and following detailed arguments.

In the response, claims 11, 13 and 14 have been amended and claims 12 and 16 were canceled. It is respectfully submitted that no new matter has been presented in these amendments.

CLAIM OBJECTIONS

The Examiner included a heading "claim objections" in the pending office action. However, it is noted that no specific objections were indicated, and that all outstanding objection except those indicated below were overcome in the preceding amendment. Therefore, it is believed that there are no pending claim objections.

REJECTIONS UNDER 35 USC §112, SECOND PARAGRAPH

Claims 13 and 14 were rejected under 35 USC §112, second paragraph, for being indefinite. The Examiner provided a list of specific issues regarding the claims.

Claim 13 has been amended to overcome the internal inconsistency noted by the Examiner. Specifically, the "homo-polyamide" language has been removed.

With regard to claim 14, the word "and" was inserted as suggested by the Examiner.

It is therefore believed that all of the claims fully comply with the requirements of 35 USC §112, second paragraph. Withdrawal of this rejection is therefore respectfully requested.

DOUBLE PATENTING

Claims 11, 12 and 14-19 were provisionally rejected on the ground of non-statutory obviousness type double patenting over copending application 10/553,259 in view of Sugino.

In response thereto, a terminal disclaimer is submitted herewith. In view of the above, reconsideration and withdrawal of the rejection are requested.

Rejections under 35 USC 103

Claims 11-15 and 17-20 were also rejected under 35 USC 103 as being unpatentable over Sugino in view of Kleiner in view of Scheibelhofer. Claim 16 was rejected under Sugino in view of Kleiner and further in view of Schiebelhofer and further in view of Tamura et al.

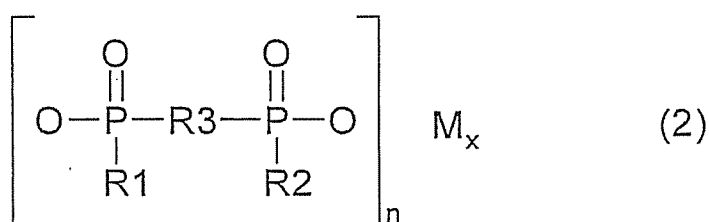
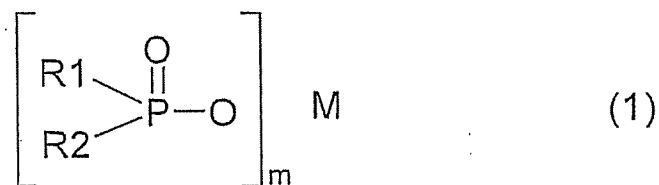
It is noted that the method of Sugino is discussed in the specification of the present application. It is noted therein that the Sugino reference utilizes red phosphorous in its flame retardant composition. The present invention avoids the use of red phosphorous as it is not a preferred material for use in making a flame retardant. Specifically, considerable safety precautions must be taken with the use of red phosphorous in manufacturing because of the potential production of the toxic phosphine. Additionally, the use of red phosphorous is limiting in that it introduces an inherent dark color into the molding composition which may not be desired for a particular application. This color can prevent preferred colors from later being manufactured.

Kleiner discloses a material containing nylon 46 or 66. The present invention teaches a wide range of nylons that can be used to attain the final product. There is nothing in Kleiner which would overcome the deficiency of the Sugino reference, as discussed above. The Examiner cites the Scheibelhoffer reference to show the use of a preferred colorant. Again, the Sugino reference utilizes red phosphorous as a flame retardant which would limit the attainable colors to those dark colors incurring from the use of the red phosphorous.

The Tamura reference contains cogent layered silicate modified by a triazine compound derivative. The field of this invention is completely different from the field of the present invention, and one skilled in the art would not anticipate the properties of this invention being useful in the subject matter of the present invention as claimed.

Independent claim 11 has been amended herein. Independent claim 11, as amended, defines a flameproof polyamide molding compound. The compound

comprises 20 - 80% by weight of one or more aliphatic polyamides and 1 - 40% by weight of one or more partly aromatic polyamides, which are selected from the group consisting of polyamides, the periodical units of which are derived from terephthalic acid and isophthalic acid and adipic acid and also hexamethylene diamine, and 1 - 15% by weight of a flameproofing agent, containing a phosphinic acid salt of formula (I) and/or a diphosphinic acid salt of formula (II) and/or



polymers thereof. R^1 , R^2 are the same or different and is C_1 - C_6 alkyl, linear or branched, and/or aryl; and R^3 is C_1 - C_{10} alkylene, linear or branched, C_6 - C_{10} arylene, -alkyl arylene or aryl alkylene and M is metal ion from the 2nd or 3rd main or auxiliary group of the periodic table. Further m is 2 or 3, n is 1 or 3, and x is 1 or 2. The compound further comprises 5 - 60% by weight of a fibre- or particle-like filler or mixtures thereof and 0.05 - 10% by weight by additional additives wherein the sum of the proportions is 100% by weight.

Claim 11 has been amended to include subject matter from previously pending claims 12 and 16. The Examiner's attention is directed to the examples of the present application. The polyamide compound shown in claim 1 shows a breaking elongation of 3.1% as described in example 1, wherein 12 % of the flameproofing agent Al-diethylphosphinate has been added. Example 2 shows a breaking elongation of 2.3% nad the content of flameproofing agent is 14%. In comparative example 1, it is noted that the breaking elongation is only 1.7% and the amount of flameproofing agent is 30%.

The above examples indicate a significant improvement in the mechanical properties of the inventive molding as opposed to the known moldings. The higher the breaking elongation of the material, the less brittle the compounds are. This is very important in the case of snap connections, which are often used in, for example, the electrical industry. Thus the properties of the claimed invention are superior to those of compounds currently known in the art.

Further indicators of the superior properties of the claimed invention can be found in Table 2. The inventive moldings shown herein have a breaking elongation of 2.9 (example 3) and 2.8 (example 4). Comparative example 2, to the contrary, provides a breaking elongation of only 1.8.

Tables 1 and 2 also show that the moldings of the present invention fulfil the requirements of the inflammability test UL-94 at a thickness of 0.4 to 0.8 mm, as shown in tables 1 and 2, even though the percentage of fireproofing agents is much lower than those in comparable known moldings. Known molding compounds require a much higher content of flame retardants to meet the requirements of UL-94, and even then require a thicker component to meet these same requirements.

Claim 11, as noted above, has been amended to more precisely show the compounds utilized and the ratios of components in the invention. It is respectfully submitted that no reasonable combination of the applied references show the compound as claimed in claim 11 as amended. In view of this, and in view of the improved properties of the invention as shown above, It is respectfully submitted that no reasonable combination of the applied references yield the invention as claimed in claim 11. One skilled in the art would not come to the teachings of the present invention from the references cited.

Claims 13-15 and 17-20, which depend directly or indirectly from independent claim 11, are believed to be allowable based, at least, upon this dependence.

Should the Examiner wish to modify the application in any way, applicant's attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark A. Hixon', with a stylized flourish at the end.

Mark A. Hixon
Registration No. 44,766

ATTORNEYS
Marshall & Melhorn, LLC
Four SeaGate - 8th Floor
Toledo, Ohio 43604
(419) 249-7114
(419) 249-7151 Facsimile
Hixon@marshall-melhorn.com